Book reviews

Pesticide remediation in soils and water

PC Kearney and T Roberts,
John Wiley and Sons Ltd, Chichester, UK, 1998
pp XV+381, price UK£85.00
ISBN 0 471 968056

This is the second (first according to the preface) volume of a new series in Agrochemicals and Plant Protection and tackles the subject of pesticide waste treatment. The first two chapters review the potential for pollution through the pesticide manufacturing and distribution system and the steps that have already been taken to reduce the likelihood of its occurring. Chapters 3 and 4 consider the properties of pesticides and how their fate and behaviour at high concentrations may affect disposal options and the processes of attenuation, familiar to those who have studied pesticide fate following their normal agricultural use. Nine of the next ten chapters each take on individual remediation processes; incineration, thermal desorption, land farming, direct radical oxidation, bioremediation, biostimulation, phytoremediation, and photoremediation while chapter 12 reviews innovative remediation technologies. Each chapter sets out well the basic theory of the process, the extent to which it is developed (generally with case histories) and an indication of the economic viability. The final chapter sets out the US regulatory framework within which remediation must take place and collates some useful information about statutes and competent authorities. This last chapter exemplifies my one real criticism of the book, which is that it is almost entirely focused on US experience and regulations; only in chapter 13 on photoremediation is there any significant reference to European experience. Having said that, the book would be of interest to those who need to get a good overview of the technologies available for pesticide remediation, in particular students on post-graduate courses, recently recruited regulatory staff and researchers who may be entering this field from a background of more classical crop protection/environmental fate of agrochemicals.

RJ Williams

Qualitative analysis: A guide to best practice

WA Hardcastle
Royal Society of Chemistry, Cambridge, UK. 1998
viii+23 pp, price US$9.50
ISBN: 085404 4620

Dr Hardcastle and his team have produced a timely, succinct guide to many of the key issues in qualitative analysis. I believe that this booklet will become essential reading to many who are training in analysis and, perhaps, to some who are already experienced practitioners. The 23 page guide is divided into 12 sections, each covering a different topic. Each section is cross-referenced to the appropriate VAM Principle and is written in the economical style necessary for a booklet which is equally at home in the laboratory or the lecture room.

I am pleased to see the emphasis on establishing a dialogue between the laboratory and the customer. Not establishing what is required at the beginning of the analysis is often a source of contention between analyst and customer and often accounts for data being produced which are in excess of what is required in terms of both quantity, necessary specification and cost. The iterative nature of the dialogue is summarised well in the figure given in appendix A.

The guide avoids going into excessive detail on how to avoid the various problems it highlights. This is an excellent approach, both preserving the brevity of the guide and recognising that the solutions to each problem will vary considerably between different types of laboratory, depending on their area of operation.

I am pleased to see this publication and hope to see it in constant use as an *aide memoire* for analysts, business development personnel, customers and laboratory managers.

MF Wilson

Pesticide bound residues in soil. Workshop – Senate Commission for the Assessment of Chemicals used in agriculture, Report 2

Wiley-VCH Verlag GmbH, Weinheim, Germany, 1998
pp 186, price UK £45.00
ISBN 3 527 27583 5

The significance of pesticide residues bound to soil (non-extractable residues) is an open question. Are they a time-bomb ticking away which will 'explode' once a certain loading is reached? Or, since 50 years of widespread pesticide use has not apparently given rise to any such identifiable long-term problems, can we merely assume that incorporation of pesticides into soil organic matter so changes them as to render them harmless for all time?

In 1996, these possible concerns and the research priorities therefrom formed the basis of a workshop in Germany, which followed from a status report on 'Ecotoxicology of Pesticides' prepared for the German (DFG) Senate Commission. This workshop, on which this multi-author volume is based, considered all aspects of the definition, behaviour and significance of pesticide residues bound in soil.

